WEST Search History

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DATE: Tuesday, May 23, 2006

Hide?	Set Name	Query	Hit Count
	DB=PGPB,USPT,USOC,EPAB,JPAB,DWPI; PLUR=YES; OP=ADJ		
☐	L7	transfer$5 same L6	6
☐	L6	(heparin or heparan)same L4	24
☐	L4	(gene or sequence or polynucleotide) same L3	27
☐	L3	((glucosaminyl same 3-o-sulfotransferase)or (glucosamine same 3-o-sulfotransferase) or (heparin-glucosamine same 3-o-sulfotransferase))	42
☐	L2	((glucosaminyl same 3-o-sulfotransferase?)or (glucosamine same 3-o-sulfotransferase?)or (heparin-glucosamine same 3-o-sulfotransferase?))	5
☐	L1	((glucosaminyl with 3-o-sulfotransferase?)or (glucosamine with 3-o-sulfotransferase?)or (heparin-glucosamine with 3-o-sulfotransferase?))	5

END OF SEARCH HISTORY

=> index bioscience medicine

INDEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, ANTE, AQUALINE, AQUASCI, BIOENG, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CAPLUS, CEABA-VTB, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DISSABS, DRUGB, DRUGMONOG2, DRUGU, EMBAL, EMBASE, ...' ENTERED AT 13:34:22 ON 23 MAY 2006

71 FILES IN THE FILE LIST IN STNINDEX

=> s ((glucosaminyl (s) 3-o-sulfotransferase)or (glucosamine (s) 3-o-sulfotransferase)or (heparin-glucosamine (s) 3-o-sulfotransferase))
20 FILE BIOSIS
4 FILE BIOTECHABS
4 FILE BIOTECHDS
17 FILE BIOTECHNO
13 FILES SEARCHED...
1 FILE CABA
38 FILE CAPLUS
44 FILE DGENE
23 FILES SEARCHED...
1 FILE DISSABS
1 FILE DRUGU
1 FILE EMBAL
23 FILE EMBASE
18 FILE ESBIOBASE
34 FILES SEARCHED...
126 FILE GENBANK
10 FILE LIFESCI
27 FILE MEDLINE
3 FILE PASCAL
48 FILES SEARCHED...
1 FILE PROMT
79 FILE SCISEARCH
7 FILE TOXCENTER
42 FILE USPATFULL
6 FILE USPAT2
64 FILES SEARCHED...
4 FILE WPIDS
66 FILES SEARCHED...
4 FILE WPINDEX
68 FILES SEARCHED...
1 FILE NLDB

24 FILES HAVE ONE OR MORE ANSWERS, 71 FILES SEARCHED IN STNINDEX

L1 QUE ((GLUCOSAMINYL (S) 3-O-SULFOTRANSFERASE) OR (GLUCOSAMINE (S) 3-O-SULFO TRANSFERASE) OR (HEPARIN-GLUCOSAMINE (S) 3-O-SULFOTRANSFERASE))

=> d rank
F1 126 GENBANK
F2 79 SCISEARCH
F3 44 DGENE
F4 42 USPATFULL
F5 38 CAPLUS
F6 27 MEDLINE
F7 23 EMBASE
F8 20 BIOSIS
F9 18 ESBIOBASE
F10 17 BIOTECHNO
F11 10 LIFESCI
F12 7 TOXCENTER
F13 6 USPAT2
F14 4 BIOTECHABS
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F16 4 WPIDS
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F18 3 PASCAL
F19 1 CABA

F20 1 DISSABS
F21 1 DRUGU
F22 1 EMBAL
F23 1 PROMT
F24 1 NLDB

=> file f2, f4-f11

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=> s L1
8 FILES SEARCHED...
L2 274 L1

=> s (gene or sequence or polynucleotide) (s)L2
L3 59 (GENE OR SEQUENCE OR POLYNUCLEOTIDE) (S) L2

=> s (heparin or heparan)(s)L3
L4 58 (HEPARIN OR HEPARAN)(S) L3

=> dup rem L4
PROCESSING COMPLETED FOR L4
L5 43 DUP REM L4 (15 DUPLICATES REMOVED)

=> d ibib abs L5 1-43

L5 ANSWER 1 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2006:118307 USPATFULL
TITLE: Methods and compositions in treating pain and painful disorders using 9949, 14230, 760, 62553, 12216, 17719, 41897, 47174, 33408, 10002, 16209, 314, 636, 27410, 33260, 619, 15985, 69112, 2158, 224, 615, 44373, 95431, 22245, 2387, 16658, 55054, 16314, 1613, 1675, 9569 or 13424 molecules
INVENTOR(S): Rosenfeld, Julie Beth, Sharon, MA, UNITED STATES
Silos-Santiago, Inmaculada, Del Mar, CA, UNITED STATES
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006100152	A1	20060511
APPLICATION INFO.:	US 2005-312958	A1	20051220 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2003-369022, filed on 19

Feb 2003, ABANDONED

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-360495P	20020228 (60)
	US 2002-370121P	20020404 (60)
	US 2002-373010P	20020416 (60)
	US 2002-373908P	20020419 (60)
	US 2002-377717P	20020503 (60)
	US 2002-379949P	20020513 (60)
	US 2002-382409P	20020521 (60)
	US 2002-385280P	20020603 (60)
	US 2002-386879P	20020606 (60)
	US 2002-387536P	20020610 (60)
	US 2002-394376P	20020708 (60)
	US 2002-404996P	20020821 (60)
	US 2002-412006P	20020919 (60)
	US 2002-417327P	20021009 (60)
	US 2002-417499P	20021010 (60)
	US 2002-426964P	20021115 (60)
	US 2002-432320P	20021210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MILLENNIUM PHARMACEUTICALS, INC., 40 Landsdowne Street, CAMBRIDGE, MA, 02139, US
NUMBER OF CLAIMS: 14
EXEMPLARY CLAIM: 1
LINE COUNT: 12747
AB The present invention relates to methods for the diagnosis and treatment of pain or painful disorders. Specifically, the present invention identifies the differential expression of 9949, 14230, 760, 62553, 12216, 17719, 41897, 47174, 33408, 10002, 16209, 314, 636, 27410, 33260, 619, 15985, 69112, 2158, 224, 615, 44373, 95431, 22245, 2387, 16658, 55054, 16314, 1613, 1675, 9569 and 13424 genes in tissues relating to pain sensation, relative to their expression in normal, or non-painful disease states, and/or in response to manipulations relevant to pain. The present invention describes methods for the diagnostic evaluation and prognosis of various pain disorders, and for the identification of subjects exhibiting a predisposition to such conditions. The invention also provides methods for identifying a compound capable of modulating pain or painful disorders. The present invention also provides methods for the identification and therapeutic use of compounds as treatments of pain and painful disorders.

L5 ANSWER 2 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2006:117736 USPATFULL
TITLE: Mitochondrial biology expression arrays
INVENTOR(S): Wallace, Douglas C, Irvine, CA, UNITED STATES
Levy, Shawn, Brentwood, TN, UNITED STATES
Kerstann, Keith, Atlanta, GA, UNITED STATES
Procaccio, Vincent, Irvine, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006099578	A1	20060511
APPLICATION INFO.:	US 2002-488619	A1	20020830 (10)
	WO 2002-US27886		20020830
			20041109 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-60316323	20010830
	CA 2001-2356540	20010831

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: GREENLEE WINNER AND SULLIVAN P C, 4875 PEARL EAST CIRCLE, SUITE 200, BOULDER, CO, 80301, US
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 10305
AB This invention provides a library of genes involved in mitochondrial biology, arrays containing probes for genes involved in mitochondrial biology, methods for making such arrays, and methods of using such arrays. Genes and probe sequences involved in mitochondrial biology in humans and mice are provided. The arrays of this invention are useful for determining mitochondrial biology gene expression profiles. Mitochondrial biology gene expression profiles are useful for determining expression profiles diagnostic of physiological conditions; diagnosing physiological conditions; identifying biochemical pathways, genes, and mutations involved in physiological conditions; identify therapeutic agents useful for preventing and/or treating such physiological conditions; evaluating and/or monitoring the efficacy of such therapies, and creating and identifying animal models of human physiologic conditions. Arrays containing probes for all genes known to be involved in mitochondrial biology are provided, as well as arrays containing subsets of such probes.

L5 ANSWER 3 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2006:34175 USPATFULL
TITLE: Identification of polynucleotides for predicting activity of compounds that interact with and/or modulate protein tyrosine kinases and/or protein tyrosine kinase pathways in breast cells
INVENTOR(S): Huang, Fei, Princeton, NJ, UNITED STATES
Han, Xia, Pennington, NJ, UNITED STATES
Reeves, Karen A., Ewing, NJ, UNITED STATES
Amler, Lukas C., Foster City, CA, UNITED STATES
Fairchild, Craig R., Yardley, PA, UNITED STATES
Lee, Francis Y., Yardley, PA, UNITED STATES
Shaw, Peter, Yardley, PA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006029944	A1	20060209
APPLICATION INFO.:	US 2005-72175	A1	20050304 (11)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-648593, filed on 26 Aug 2003, PENDING

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-406385P	20020827 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: STEPHEN B. DAVIS, BRISTOL-MYERS SQUIBB COMPANY, PATENT DEPARTMENT, P O BOX 4000, PRINCETON, NJ, 08543-4000, US
NUMBER OF CLAIMS: 20
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 9 Drawing Page(s)
LINE COUNT: 6433
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention describes polynucleotides that have been discovered to correlate to the relative intrinsic sensitivity or resistance of cells, e.g., breast cell lines, to treatment with compounds that interact with and modulate, e.g., inhibit, protein tyrosine kinases, such as, for example, members of the Src family of tyrosine kinases, e.g., Src, Fgr, Fyn, Yes, Blk, Hck, Lck and Lyn, as well as other protein tyrosine kinases, including, Bcr-abl, Jak, PDGFR, c-kit and Eph receptors. These polynucleotides have been shown, through a weighted voting cross validation program, to have utility in predicting the resistance and sensitivity of breast cell lines to the compounds. The expression level or phosphorylation status of some polynucleotides is regulated by treatment with a particular protein tyrosine kinase inhibitor compound, thus indicating that these polynucleotides are involved in the protein tyrosine kinase signal transduction pathway, e.g., Src tyrosine kinase. Such polynucleotides, whose expression levels correlate highly with drug sensitivity or resistance and which are modulated by treatment with the compounds,

comprise polynucleotide predictor or marker sets useful in methods of predicting drug response, and as prognostic or diagnostic indicators in disease management, particularly in those disease areas, e.g., breast cancer, in which signaling through the protein tyrosine kinase pathway, such as the Src tyrosine kinase pathway, is involved with the disease process.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 4 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2006:3865 USPATFULL
TITLE: Bioinformatically detectable group of novel regulatory genes and uses thereof
INVENTOR(S): Bentwich, Isaac, Kvuzat Shiler, ISRAEL

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2006003322	A1	20060105
APPLICATION INFO.:	US 2002-310914	A1	20021206 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2002-293338, filed on 14 Nov 2002, ABANDONED
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: ROSETTA-GENOMICS, 10 PLAUT-STREET SCIENCE PARK, P.O. BOX 2061, REHOVOT, 76706, IL
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 144 Drawing Page(s)
LINE COUNT: 30395
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a first group of novel genes, here identified as "genomic address messenger" or "GAM" genes, and a second group of novel operon-like genes, here identified as "genomic record" or "GR" genes. GAM genes selectively inhibit translation of known `target` genes, many of which are known to be involved in various diseases. Nucleic acid molecules are provided respectively encoding 20600 GAM genes, and 6635 GR genes, as are vectors and probes both comprising the nucleic acid molecules, and methods and systems for detecting GAM and GR genes and specific functions and utilities thereof, for detecting expression of GAM and GR genes, and for selectively enhancing and selectively inhibiting translation of the respective target genes thereof.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 5 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:298974 USPATFULL
TITLE: Method for diagnosing pancreatic cancer
INVENTOR(S): Nakamura, Yusuke, Yokohama-shi, JAPAN
Katagiri, Toyomasa, Shinagawa-ku, JAPAN
Nakagawa, Hidewaki, Shinagawa-ku, JAPAN
PATENT ASSIGNEE(S): Oncotherapy Science, Inc., Kawasaki-shi, JAPAN (non-U.S. corporation)
The University of Tokyo, Bunkyo-ku, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005260639	A1	20051124
APPLICATION INFO.:	US 2005-90739	A1	20050324 (11)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-JP11817, filed on 17 Sep 2003, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 2004-555809P	20040324 (60)
	US 2003-450889P	20030228 (60)
	US 2002-414872P	20020930 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 60
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 16 Drawing Page(s)
LINE COUNT: 6547
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Objective methods for detecting and diagnosing pancreatic cancer (PNC) are described herein. In one embodiment, the diagnostic method involves determining the expression level of PNC-associated gene that discriminates between PNC cells and normal cells. The present invention further provides methods of screening for therapeutic agents useful in the treatment of pancreatic cancer, methods of treating pancreatic cancer and method of vaccinating a subject against pancreatic cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 6 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:297821 USPATFULL
TITLE: Genes and polypeptides relating to prostate cancers
INVENTOR(S): Nakamura, Yusuke, Yokohama-shi, JAPAN
Katagiri, Toyomasa, Shinagawa-ku, JAPAN
Nakagawa, Hidewaki, Shinagawa-ku, JAPAN
Nakatsuru, Shuichi, Saitama-shi, JAPAN
PATENT ASSIGNEE(S): Oncotherapy Science, Inc., Kawasaki-shi, JAPAN (non-U.S. corporation)
The University of Tokyo, Bunkyo-ku, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005259483	A1	20051124
APPLICATION INFO.:	US 2005-88634	A1	20050323 (11)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. WO 2003-JP12073, filed on 22 Sep 2003, UNKNOWN

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-414873P	20020930 (60)
	US 2004-555810P	20040323 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 144
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 5740
AB Objective methods for detecting and diagnosing prostate cancer (PRC) or prostatic intraepithelial neoplasia (PIN) are described herein. In one embodiment, the diagnostic method involves the determining an expression level of PRC-associated gene that discriminate between PRC or PIN and nomal cell. The present invention further provides methods of screening for therapeutic agents useful in the treatment of either or both of PRC and PIN, methods of treating either or both of PRC and PIN and method of vaccinating a subject against either or both of PRC and PIN.

L5 ANSWER 7 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:241176 USPATFULL
TITLE: Compositions and methods for diagnosing and treating mental disorders
INVENTOR(S): Akil, Huda, Ann Arbor, MI, UNITED STATES
Atz, Mary, Tustin, CA, UNITED STATES
Bunney, William E. JR., Laguna Beach, CA, UNITED STATES
Choudary, Prabhakara V., Davis, CA, UNITED STATES
Evans, Simon J., Milan, MI, UNITED STATES
Jones, Edward G., Winters, CA, UNITED STATES
Li, Jun, Palo Alto, CA, UNITED STATES
Lopez, Juan F., Ann Arbor, MI, UNITED STATES

Myers, Richard M., Stanford, CA, UNITED STATES
Thompson, Robert C., Ann Arbor, MI, UNITED STATES
Tomita, Hiroaki, Irvine, CA, UNITED STATES
Vawter, Marquis P., Niguel, CA, UNITED STATES
Watson, Stanley, Ann Arbor, MI, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005209181	A1	20050922
APPLICATION INFO.:	US 2004-982556	A1	20041104 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-517751P	20031105 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 32
EXEMPLARY CLAIM: 1
LINE COUNT: 11427
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods for diagnosing mental disorders (e.g., psychotic disorders such as schizophrenia). The invention also provides methods of identifying modulators of such mental disorders as well as methods of using these modulators to treat patients suffering from such mental disorders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 8 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:240500 USPATFULL
TITLE: Signatures of ER status in breast cancer
INVENTOR(S): Erlander, Mark G., Encinitas, CA, UNITED STATES
Ma, Xiao-Jun, San Diego, CA, UNITED STATES
Wang, Wei, San Marcos, CA, UNITED STATES
Wittliff, James L., Louisville, KY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005208500	A1	20050922
APPLICATION INFO.:	US 2004-794263	A1	20040304 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-451942P	20030304 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 21
EXEMPLARY CLAIM: 1
LINE COUNT: 8789
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the identification and use of gene expression profiles, or patterns, suitable for identification of populations that are positive and negative for estrogen receptor expression. The gene expression profiles may be embodied in nucleic acid expression, protein expression, or other expression formats, and may be used in the study and/or diagnosis of cells and tissue in breast cancer as well as for the study and/or determination of prognosis of a patient, including breast cancer survival.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 9 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:240496 USPATFULL
TITLE: Methods of testing for bronchial asthma or chronic obstructive pulmonary disease
INVENTOR(S): Ohtani, Noriko, Gunma, JAPAN

Sugita, Yuji, Tsukuba-shi, JAPAN
Yamaya, Mutsuo, Sendai-shi, JAPAN
Kubo, Hiroshi, Sendai-shi, JAPAN
Nagai, Hiroichi, Gifu-shi, JAPAN
Izuhara, Kenji, Saga-shi, JAPAN
PATENT ASSIGNEE(S): Genox Research, Inc., Ibaraki, JAPAN (non-U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005208496	A1	20050922
APPLICATION INFO.:	US 2003-631467	A1	20030731 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	JP 2002-229312	20020806
	JP 2003-77212	20030320

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: HAMILTON, BROOK, SMITH & REYNOLDS, P.C., 530 VIRGINIA ROAD, P.O. BOX 9133, CONCORD, MA, 01742-9133, US
NUMBER OF CLAIMS: 38
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 69 Drawing Page(s)
LINE COUNT: 12839
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An objective of the present invention is to provide a method of testing for bronchial asthma or chronic obstructive pulmonary disease, a method of screening for candidate compounds for treating bronchial asthma or chronic obstructive pulmonary disease, and a pharmaceutical agent for treating bronchial asthma or chronic obstructive pulmonary disease. The present invention identified genes whose expression levels varied between respiratory epithelial cells that had been stimulated by IL-13 to induce the goblet cell differentiation, and unstimulated respiratory epithelial cells. The respiratory epithelial cells were cultured according to the air interface method. The genes were revealed to be useful as markers for testing for bronchial asthma or chronic obstructive pulmonary disease and screening for therapeutic agents for such diseases. Specifically, the present invention provides methods of testing for bronchial asthma or chronic obstructive pulmonary disease and methods of screening for compounds to treat the diseases based on the comparison of the expression levels of marker genes identified as described above.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 10 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:171266 USPATFULL
TITLE: Isolated human drug-metabolizing proteins, nucleic acid molecules encoding human drug-metabolizing proteins, and uses thereof
INVENTOR(S): Guegler, Karl, Menlo Park, CA, UNITED STATES
Ketchum, Karen A., Germantown, MD, UNITED STATES
Di Francesco, Valentina, Rockville, MD, UNITED STATES
Beasley, Ellen M., Darnestown, MD, UNITED STATES
PATENT ASSIGNEE(S): APPLERA CORPORATION, Norwalk, CT, UNITED STATES (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005148013	A1	20050707
APPLICATION INFO.:	US 2005-61452	A1	20050222 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2004-798414, filed on 12 Mar 2004, GRANTED, Pat. No. US 6875597 Division of Ser. No. US 2002-162639, filed on 6 Jun 2002, GRANTED, Pat. No. US 6730505 Division of Ser. No. US 2000-735935, filed on 14 Dec 2000, GRANTED, Pat. No. US 6420150

	NUMBER	DATE

PRIORITY INFORMATION: US 2000-252895P 20001127 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CELERA GENOMICS, ATTN: WAYNE MONTGOMERY, VICE PRES, INTEL PROPERTY, 45 WEST GUDE DRIVE, C2-4#20, ROCKVILLE, MD, 20850, US
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 2594
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides amino acid sequences of peptides that are encoded by genes within the human genome, the drug-metabolizing enzyme peptides of the present invention. The present invention specifically provides isolated peptide and nucleic acid molecules, methods of identifying orthologs and paralogs of the drug-metabolizing enzyme peptides, and methods of identifying modulators of the drug-metabolizing enzyme peptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 11 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:111528 USPATFULL
TITLE: Breast cancer signatures
INVENTOR(S): Erlander, Mark, Encinitas, CA, UNITED STATES
Ma, Xiao-Jun, San Diego, CA, UNITED STATES
Wang, Wei, San Marcos, CA, UNITED STATES
Wittliff, James L., Louisville, KY, UNITED STATES
PATENT ASSIGNEE(S): Arcturus Bioscience, Inc. University of Louisville (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005095607	A1	20050505
APPLICATION INFO.:	US 2004-795092	A1	20040305 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-453006P	20030307 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834, US
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1-7
NUMBER OF DRAWINGS: 3 Drawing Page(s)
LINE COUNT: 3176
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to the identification and use of gene expression profiles, or patterns, suitable for identification of breast cancer patient populations with different survival outcomes. The gene expression profiles may be embodied in nucleic acid expression, protein expression, or other expression formats, and may be used in the study and/or determination of the prognosis of a patient, including breast cancer survival.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 12 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:111513 USPATFULL
TITLE: Identification of ovarian cancer tumor markers and therapeutic targets
INVENTOR(S): Jazaeri, Amir A, Charlottsville, VA, UNITED STATES
Boyd, Jeffrey, Dobbs Ferry, NY, UNITED STATES
Liu, Edison T, Cuscaden Walk, SINGAPORE

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2005095592	A1	20050505
APPLICATION INFO.:	US 2003-505680	A1	20030213 (10)

WO 2003-US4688 20030213

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-357031P	20020213 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988, US
NUMBER OF CLAIMS: 57
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 20 Drawing Page(s)
LINE COUNT: 6049
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present disclosure provides methods for classifying ovarian tumors into BRCA1-type, BRCA2-type or non-BRCA-type tumor types by measuring expression levels of a plurality of disclosed ovarian tumor markers. The markers disclosed herein are useful in the diagnosis, staging, detection, and/or treatment of ovarian cancer. Also provided are methods of selecting a treatment regimen by selecting the tumor type. Ovarian cancer-linked logarithmic expression ratios and kits for diagnosis, staging, and detection of ovarian cancer using are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 13 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2005:52350 USPATFULL
TITLE: Heparan sulfate D-glucosaminyl 3-O-sulfotransferases, and uses therefor
INVENTOR(S): Rosenberg, Robert D., Boston, MA, United States
Shworak, Nicholas W., Westwood, MA, United States
Liu, Jian, Chapel Hill, NC, United States
Fritze, Linda M. S., Sharon, MA, United States
Schwartz, John J., Newtonville, MA, United States
Zhang, Lijuan, Winthrop, MA, United States
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, Cambridge, MA, United States (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6861254	B1	20050301
APPLICATION INFO.:	US 2000-557262		20000424 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. WO 1998-US22597, filed on 23 Oct 1998

	NUMBER	DATE
PRIORITY INFORMATION:	US 1997-62762P	19971024 (60)
	US 1997-65437P	19971031 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Shukla, Ram R.
LEGAL REPRESENTATIVE: Eitan, Pearl, Latzer & Cohen Zedek, LLP, Cohen, Mark S.
NUMBER OF CLAIMS: 18
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 3 Drawing Page(s)
LINE COUNT: 3646
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are novel isolated nucleic acids and substantially pure protein preparations for naturally occurring and synthetic or chimeric heparan sulfate D-glicosaminyl 3-O-sulfo-transferases (3-OSTs). Also disclosed are uses for these genes and proteins, including uses for the modification and sequencing of glycosaminoglycans.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 14 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2005:1020555 CAPLUS
DOCUMENT NUMBER: 143:320266

TITLE: Genes with differential expression profile between human dental pulp stem cells and mesenchymal stem cells and use for regenerating tooth germ
INVENTOR(S): Ueda, Minoru; Yamada, Yoichi
PATENT ASSIGNEE(S): Hitachi Medical Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 246 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005253442	A2	20050922	JP 2004-111582	20040309

PRIORITY APPLN. INFO.: JP 2004-111582 20040309

AB The present invention relates to a group of genes whose expression profile are different between human dental pulp stem cells and mesenchymal stem cells, as well as a method for regenerating tooth germ using these genes. According to the present invention, the gene expression profiles and cluster anal. between human dental pulp stem cells (hDPSCs) and mesenchymal stem cells (hMSCs) as representative populations of odontoprogenitor and osteoprogenitor cell were revealed, and a group of genes whose expression profile are different between human dental pulp stem cells and mesenchymal stem cells was identified. By utilizing the groups of the genes of the present invention together with the dental pulp stem cells and mesenchymal stem cells, hard tissue such as tooth germ, dental pulp, dentin or bone can be regenerated. The present inventors investigated the gene expression profiles and cluster anal. between human dental pulp stem cells (hDPSCs) and mesenchymal stem cells (hMSCs) as representative populations of odontoprogenitor and osteoprogenitor cells, resp. At first, the present inventors confirmed the differential expression of Alk. phosphatase (ALP) activity, Dentin matrix protein 1 (DMP 1), Dentin phosphosialoprotein (DSPP) using by real time reverse-transcriptase polymerase chain reaction (RT-PCR) in total RNA from primary cultures. The no. of genes in hDPSCs(I) that were up-regulated by 2>-fold, compared to hMSCs, was 614 (Table, IV). On the other band, the no. of genes down regulated by <2-fold in hDPSCs (I) was 296 (Table III, IV).

L5 ANSWER 15 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:254299 USPATFULL
TITLE: Methods and compositions for treating urological disorders using 44390, 54181, 211, 5687, 884, 1405, 636, 4421, 5410, 30905, 2045, 16405, 18560, 2047, 33751, 52872, 14063, 20739, 32544, 43239, 44373, 51164, 53010, 16852, 1587, 2207, 22245, 2387, 52908, 69112, 14990, 18547, 115, 579, 15985, 15625, 760, 18603, 2395, 2554, 8675, 32720, 4809, 14303, 16816, 17827, 32620, 577, 619, 1423, 2158, 8263, 15402, 16209, 16386, 21165, 30911, 41897, 1643, 2543, 9626, 13231, 32409, 84260, 2882, 8203, 32678, or 55053
INVENTOR(S): Karicheti, Venkateswarlu, Chapel Hill, NC, UNITED STATES
Silos-Santiago, Inmaculada, Del Mar, CA, UNITED STATES
Eliasof, Scott D., Lexington, MA, UNITED STATES
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004197825	A1	20041007
APPLICATION INFO.:	US 2004-757262	A1	20040114 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-440318P	20030115 (60)
	US 2003-444783P	20030204 (60)
	US 2003-457901P	20030327 (60)
	US 2003-468775P	20030508 (60)
	US 2003-471614P	20030519 (60)

US 2003-478742P 20030616 (60)
US 2003-488529P 20030718 (60)
US 2003-491156P 20030730 (60)
US 2003-499594P 20030902 (60)
US 2003-506332P 20030926 (60)
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Millennium Pharmaceuticals, Inc., 40 Landsdowne Street, Cambridge, MA, 02139
NUMBER OF CLAIMS: 22
EXEMPLARY CLAIM: 1
LINE COUNT: 9287
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to methods for the diagnosis and treatment of a urological disorder or urological disorders. Specifically, the present invention identifies the differential expression of 44390, 54181, 211, 5687, 884, 1405, 636, 4421, 5410, 30905, 2045, 16405, 18560, 2047, 33751, 52872, 14063, 20739, 32544, 43239, 44373, 51164, 53010, 16852, 1587, 2207, 22245, 2387, 52908, 69112, 14990, 18547, 115, 579, 15985, 15625, 760, 18603, 2395, 2554, 8675, 32720, 4809, 14303, 16816, 17827, 32620, 577, 619, 1423, 2158, 8263, 15402, 16209, 16386, 21165, 30911, 41897, 1643, 2543, 9626, 13231, 32409, 84260, 2882, 8203, 32678 and 55053 genes in tissues relating to urological disorder, relative to their expression in normal, or non-urological disorder disease states, and/or in response to manipulations relevant to a urological disorder. The present invention describes methods for the diagnostic evaluation and prognosis of various urological diseases, and for the identification of subjects exhibiting a predisposition to such conditions. The invention also provides methods for identifying a compound capable of modulating a urological disorder or urological disorders. The present invention also provides methods for the identification and therapeutic use of compounds as treatments of urological disorders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 16 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:247275 USPATFULL
TITLE: Methods of 6-0 sulfating polysaccharides and 6-0 sulfated polysaccharide preparations
INVENTOR(S): Rosenberg, Robert, Cambridge, MA, UNITED STATES
Zhang, Lijuan, St Charles, MO, UNITED STATES
Beeler, David L, Cambridge, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004191870	A1	20040930
APPLICATION INFO.:	US 2004-473180	A1	20040325 (10)
	WO 2002-US10172		20020328

	NUMBER	DATE
PRIORITY INFORMATION:	US 2001-279523P	20010328 (60)
	US 2001-316289P	20010830 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: EITAN, PEARL, LATZER & COHEN ZEDEK LLP, 10 ROCKEFELLER PLAZA, SUITE 1001, NEW YORK, NY, 10020
NUMBER OF CLAIMS: 44
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 1897
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are methods of 6-O-sulfating glucosaminyl N-acetylglucosamine residues (GlcNAc) in a polysaccharide preparation and methods of converting anticoagulant-inactive heparan sulfate to anticoagulant-active heparan sulfate and substantially pure polysaccharide preparations may by such methods. Also disclosed is a mutant CHO cell which hyper-produces anticoagulant-active heparan sulfate. Methods for elucidating the sequence of activity of enzymes in a biosynthetic pathway are provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 17 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:233273 USPATFULL
TITLE: Novel therapeutic targets in cancer
INVENTOR(S): Morris, David W., Davis, CA, UNITED STATES
Malandro, Marc S., Davis, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004180344	A1	20040916
APPLICATION INFO.:	US 2003-388838	A1	20030314 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 755 PAGE MILL RD, PALO ALTO, CA, 94304-1018
NUMBER OF CLAIMS: 74
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 4 Drawing Page(s)
LINE COUNT: 7303
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to novel sequences for use in detection, diagnosis and treatment of cancers, especially lymphomas. The invention provides cancer-associated (CA) polynucleotide sequences whose expression is associated with cancer. The present invention provides CA polypeptides associated with cancer that are present on the cell surface and present novel therapeutic targets against cancer. The present invention further provides diagnostic compositions and methods for the detection of cancer. The present invention provides monoclonal and polyclonal antibodies specific for the CA polypeptides. The present invention also provides diagnostic tools and therapeutic compositions and methods for screening, prevention and treatment of cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 18 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:196858 USPATFULL
TITLE: Isolated human drug-metabolizing proteins, nucleic acid molecules encoding human drug-metabolizing proteins, and uses thereof
INVENTOR(S): Guegler, Karl. Menlo Park, CA, UNITED STATES
Ketchum, Karen A., Germantown, MD, UNITED STATES
Francesco, Valentina Di, Rockville, MD, UNITED STATES
Beasley, Ellen M., Darnestown, MD, UNITED STATES
PATENT ASSIGNEE(S): APPLERA CORPORATION, Norwalk, CT (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004152163	A1	20040805
	US 6875597	B2	20050405
APPLICATION INFO.:	US 2004-798414	A1	20040312 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2002-162639, filed on 6 Jun 2002, GRANTED, Pat. No. US 6730505 Division of Ser. No. US 2000-735935, filed on 14 Dec 2000, GRANTED, Pat. No. US 6420150

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-252895P	20001127 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CELERA GENOMICS CORP., ATTN: WAYNE MONTGOMERY, VICE PRES, INTEL PROPERTY, 45 WEST GUDE DRIVE, C2-4#20, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 16
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 2529
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides amino acid sequences of peptides that are encoded by genes within the human genome, the drug-metabolizing enzyme peptides of the present invention. The present invention specifically provides isolated peptide and nucleic acid molecules, methods of identifying orthologs and paralogs of the drug-metabolizing enzyme peptides, and methods of identifying modulators of the drug-metabolizing enzyme peptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 19 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:114048 USPATFULL
TITLE: Drug metabolizing enzymes
INVENTOR(S): Azimzai, Yalda, Oakland, CA, UNITED STATES
Baughn, Mariah R, San Leandro, CA, UNITED STATES
Borowsky, Mark L, Redwood City, CA, UNITED STATES
Ding, Li, Creve Coeur, MO, UNITED STATES
Duggan, Brendan M, Sunnyvale, CA, UNITED STATES
Elliott, Vicki S, San Jose, CA, UNITED STATES
Gandhi, Ameena R, San Francisco, CA, UNITED STATES
Griffin, Jennifer A, Fremont, CA, UNITED STATES
Hafalia, April J A, Daly City, CA, UNITED STATES
Ison, Craig H, San Jose, CA, UNITED STATES
Khan, Farrah A, Des Plaines, IL, UNITED STATES
Lal, Preeti G, Santa Clara, CA, UNITED STATES
Lee, Ernestine A, Castro Valley, CA, UNITED STATES
Lu, Dyung Aina M, San Jose, CA, UNITED STATES
Nguyen, Danniel B, San Jose, CA, UNITED STATES
Arvizu, Chandra S, San Jose, CA, UNITED STATES
Policky, Jennifer L, San Jose, CA, UNITED STATES
Ramkumar, Jayalaxmi, Fremont, CA, UNITED STATES
Ring, Huizun Z, Foster City, CA, UNITED STATES
Sanjanwala, Madhusudan M, San Jose, CA, UNITED STATES
Tang, Y Tom, San Jose, CA, UNITED STATES
Tribouley, Catherine M, San Francisco, CA, UNITED STATES
Chawla, Narinder K, Union City, CA, UNITED STATES
Walsh, Roderick T, Canterbury, UNITED KINGDOM
Warren, Bridget A, Encinitas, CA, UNITED STATES
Xu, Yuming, Mountain View, CA, UNITED STATES
Yang, Junming, San Jose, CA, UNITED STATES
Yao, Monique G, Carmel, IN, UNITED STATES
Yue, Henry, Sunnyvale, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004086887	A1	20040506
APPLICATION INFO.:	US 2003-381898	A1	20030327 (10)
	WO 2001-US30662		20010928

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: INCYTE CORPORATION, 3160 PORTER DRIVE, PALO ALTO, CA, 94304
NUMBER OF CLAIMS: 91
EXEMPLARY CLAIM: 1
LINE COUNT: 8244
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides human drug metabolizing enzymes (DME) and polynucleotides which identify and encode DME. The invention also provides expression vectors, host cells, antibodies, agonists, and antagonists. The invention also provides methods for diagnosing, treating, or preventing disorders associated with aberrant expression of DME.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 20 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:31093 USPATFULL
TITLE: System for identifying and analyzing expression of are-containing genes

INVENTOR(S): Abu-Khabar, Khalid S., Riyadh, SAUDI ARABIA
Williams, Bryan R.G., Cleveland, OH, UNITED STATES
Frevel, Mathias, Wellington, NEW ZEALAND
Silverman, Robert H., Beachwood, OH, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004023231	A1	20040205
APPLICATION INFO.:	US 2003-257294	A1	20030714 (10)
	WO 2001-US11993		20010412

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Pamela A Docherty, Calfee Halter & Griswold, 1400 Mc Donald Investment Center, 800 Superior Ave, Cleveland, OH, 44114
NUMBER OF CLAIMS: 83
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 15 Drawing Page(s)
LINE COUNT: 3591
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a gene discovery system and gene expression systems specific for genes encoding ARE-containing mRNAs. In one aspect, the present invention relates to computational methods of selecting coding sequences of ARE-genes from databases using a one or more ARE search sequences. The ARE search sequences are from 10 to 80 nucleotides in length and comprise a sequence which is encompassed by one of the following two sequences: (a) WU/T(AU/TU/TU/TA)TWWW, SEQ ID NO. 1, wherein none or one of the nucleotides outside of the parenthesis is replaced by a different nucleotide, and wherein W represents A, U. or T; and (b) U/T(AU/TU/T/U/T)n, SEQ ID NO. 2, wherein n indicates that the search sequence comprises from 3 to 12 of the tetrameric sequences contained within the parenthesis. The method comprises extracting from the databases, those nucleic acids whose protein coding sequences are upstream and contiguous with a 3' untranslated region (UTR) that comprises one of the ARE search sequences. The present invention also relates to methods of selectively amplifying RNA and cDNA molecules using primers derived from and complementary to the consensus 5' sequence motifs and primers derived from and complementary to the ARE search sequence. The present invention also relates to methods of selectively amplifying ARE genes which employ a 3' primer which is from 15 to 50 nucleotides and length and comprises from 2 to 10 pentamers having the sequence TAAAT. The pentameric sequences in the primers are either overlapping or non-overlapping. The 3' primers are used in the reverse transcription step of the methods, the polymerase chain reaction (PCR) amplification step of the methods, or in both the reverse transcription step and the PCR amplification step of the methods. The present invention also relates to methods of making libraries which comprise portions of the ARE genes that are selectively amplified by the present methods and to methods of making microarrays which comprise probes that hybridize under stringent conditions to portions of the protein coding sequences of the ARE genes that are selectively amplified by the present methods. The present invention also relates to librairies and the microarrays that are made by such methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 21 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:2047 USPATFULL
TITLE: Breast cancer progression signatures
INVENTOR(S): Erlander, Mark G., Encinitas, CA, UNITED STATES
Ma, Xia-Jun, San Diego, CA, UNITED STATES
Sgroi, Dennis C., Winchester, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2004002067	A1	20040101
APPLICATION INFO.:	US 2001-28018	A1	20011221 (10)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: MORRISON & FOERSTER LLP, 3811 VALLEY CENTRE DRIVE,

SUITE 500, SAN DIEGO, CA, 92130-2332
NUMBER OF CLAIMS: 29
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 26 Drawing Page(s)
LINE COUNT: 5596
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions for the identification of breast cancer progression signatures are provided. The signature profiles are identified based upon multiple sampling of reference breast tissue samples from independent cases of breast cancer and provide a reliable set of molecular criteria for identification of cells as being in one or more particular stages of breast cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 22 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2004:66006 USPATFULL
TITLE: DNA array sequence selection
INVENTOR(S): Lorenz, Matthias, Bethesda, MD, United States
PATENT ASSIGNEE(S): The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 6706867	B1	20040316
APPLICATION INFO.:	US 2000-741238		20001219 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: GRANTED
PRIMARY EXAMINER: Horlick, Kenneth R.
ASSISTANT EXAMINER: Wilder, Cynthia
LEGAL REPRESENTATIVE: Leydig, Voit & Mayer, Ltd.
NUMBER OF CLAIMS: 8
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 3 Drawing Figure(s); 29 Drawing Page(s)
LINE COUNT: 23532
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides methods and compositions for the construction of custom cDNA microarrays. In particular, the methods involve the selection of relevant clusters based on knowledge and expression patterns using public database information and the identification of the best representative cDNA clones within the selected cluster. The methods facilitate the construction of custom microarrays suitable for use in any biotechnological art. In preferred embodiments, the present invention provides the the ImmunoChip.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 23 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2004:183018 CAPLUS
DOCUMENT NUMBER: 140:233971
TITLE: Hypermethylation of ***heparan*** sulfate D-***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** -2 (3-OST-2) ***gene*** in human cancers, real-time PCR analysis for diagnosis of cancer progression
INVENTOR(S): Ushijima, Toshikazu; Takada, Toshio; Miyamoto, Kazuaki
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan; Japan, National Cancer Center
SOURCE: PCT Int. Appl., 30 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004018668	A1	20040304	WO 2003-JP10480	20030820

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,

CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2003257587 A1 20040311 AU 2003-257587 20030820

JP 2004135655 A2 20040513 JP 2003-208186 20030821

PRIORITY APPLN. INFO.: JP 2002-243126 A 20020823

WO 2003-JP10480 W 20030820

AB A method of evaluating the progression of cancers in human-origin specimens by measuring the methylation frequency in the CpG island (CGI) in the 5' region of the ***heparan*** sulfate D- ***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** -2 (3-OST-2) ***gene*** by the real-time PCR method; is disclosed. Primers and probes for use in diagnosis are provided. Aberrant CpG methylations play important roles in cancer development and progression. In this study, aberrant methylations in human breast cancer were searched for using methylation-sensitive representational difference anal. (MS-RDA). A CpG island (CGI) in the 5' region of the ***heparan*** sulfate D- ***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** -2 (3-OST-2) ***gene*** was found to be hypermethylated, while its exon 2 was hypomethylated. In seven breast cancer cell lines, hypermethylation of the 5' region and loss of 3-OST-2 expression were obsd. Treatment with a demethylating agent, 5-aza-2'-deoxycytidine, removed the methylation of the CGI in the 5' region and restored its expression, demonstrating silencing of the 3-OST-2 gene. Methylation-specific PCR (MSP) anal. in 30 primary breast cancers showed that the hypermethylation of the CGI in the 5' region was present in 9 (30%) of them, compared to 1 out of 35 normal subjects. Quant. reverse transcriptase-PCR (RT-PCR) anal. in 37 primary breast cancers showed that the av. expression level was decreased in them. These results showed that silencing of 3-OST-2 was present in a wide range of human cancers.

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 24 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN

ACCESSION NUMBER: 2004:41607 CAPLUS

DOCUMENT NUMBER: 140:107498

TITLE: Protein and cDNA sequences of a novel human heparin sulfate D-glucosaminyl-3-O-sulfotransferase isoform 5 (3-OST-5) and use in therapy and drug screening

INVENTOR(S): Xia, Guoqing; Malmstrom, Anders; Liu, Jian; Chen, Jinghua; Duncan, Michael B.; Shukla, Deepak; Tiwari, Vaibhav

PATENT ASSIGNEE(S): University of North Carolina at Chapel Hill, USA; The Board of Trustees of the University of Illinois

SOURCE: PCT Int. Appl., 143 pp.
CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004005475	A2	20040115	WO 2003-US21094	20030707
WO 2004005475	A3	20041202		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR,

BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
AU 2003247808 A1 20040123 AU 2003-247808 20030707
PRIORITY APPLN. INFO.: US 2002-394199P P 20020705
WO 2003-US21094 W 20030707

AB The invention provides protein and cDNA sequences of a novel human heparin sulfate D-glucosaminyl-3-O-sulfotransferase isoform 5. Recombinant host cells, recombinant nucleic acids and recombinant proteins are also disclosed, along with methods of producing each. Isolated and purified antibodies to 3-OST-5 homologs, and methods of producing the same, are also disclosed. 3-OST-5 gene products have biol. activity in specific heparan sulfate 3-O-sulfotransferase reactions. These reactions provide unique modified heparan sulfate. Thus, therapeutic methods involving this activity are also disclosed.

L5 ANSWER 25 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2003:289088 USPATFULL
TITLE: Methods and compositions in treating pain and painful disorders using 9949, 14230, 760, 62553, 12216, 17719, 41897, 47174, 33408, 10002, 16209, 314, 636, 27410, 33260, 619, 15985, 69112, 2158, 224, 615, 44373, 95431, 22245, 2387, 16658, 55054, 16314, 1613, 1675, 9569 or 13424 molecules
INVENTOR(S): Rosenfeld, Julie Beth, Sharon, MA, UNITED STATES
Silos-Santiago, Inmaculada, Del Mar, CA, UNITED STATES
PATENT ASSIGNEE(S): Millennium Pharmaceuticals, Inc. (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003203847	A1	20031030
APPLICATION INFO.:	US 2003-369022	A1	20030219 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-360495P	20020228 (60)
	US 2002-370121P	20020404 (60)
	US 2002-373010P	20020416 (60)
	US 2002-373908P	20020419 (60)
	US 2002-377717P	20020503 (60)
	US 2002-379949P	20020513 (60)
	US 2002-382409P	20020521 (60)
	US 2002-385280P	20020603 (60)
	US 2002-386879P	20020606 (60)
	US 2002-387536P	20020610 (60)
	US 2002-394376P	20020708 (60)
	US 2002-404996P	20020821 (60)
	US 2002-412006P	20020919 (60)
	US 2002-417327P	20021009 (60)
	US 2002-417499P	20021010 (60)
	US 2002-426964P	20021115 (60)
	US 2002-432320P	20021210 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Paul J. Paglierani, Millennium Pharmaceuticals, Inc., 75 Sidney Street, Cambridge, MA, 02139
NUMBER OF CLAIMS: 13
EXEMPLARY CLAIM: 1
LINE COUNT: 12663
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to methods for the diagnosis and treatment of pain or painful disorders. Specifically, the present invention identifies the differential expression of 9949, 14230, 760, 62553, 12216, 17719, 41897, 47174, 33408, 10002, 16209, 314, 636, 27410, 33260, 619, 15985, 69112, 2158, 224, 615, 44373, 95431, 22245, 2387, 16658, 55054, 16314, 1613, 1675, 9569 and 13424 genes in tissues relating to pain sensation, relative to their expression in normal, or non-painful disease states, and/or in response to manipulations relevant to pain. The present invention describes methods for the diagnostic evaluation and prognosis of various pain disorders, and for the identification of subjects exhibiting a predisposition to such conditions. The invention also provides methods for identifying a compound capable of modulating

pain or painful disorders. The present invention also provides methods for the identification and therapeutic use of compounds as treatments of pain and painful disorders.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 26 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2003:282629 USPATFULL
TITLE: Grading of breast cancer
INVENTOR(S): Erlander, Mark G., Encinitas, CA, UNITED STATES
Ma, Xiao-Jun, San Diego, CA, UNITED STATES
Sgroi, Dennis C., Winchester, MA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003198972	A1	20031023
APPLICATION INFO.:	US 2002-211015	A1	20020801 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2001-28018, filed on 21 Dec 2001, PENDING
DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: Kawai Lau, Morrison & Foerster LLP, Suite 500, 3811 Valley Centre Drive, San Diego, CA, 92130-2332
NUMBER OF CLAIMS: 104
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 2803
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods and compositions for the identification of breast cancer grade signatures are provided. The signature profiles are identified based upon multiple sampling of reference breast tissue samples from independent cases of breast cancer and provide a reliable set of molecular criteria for identification of cells as being in one or more particular stages and/or grades of breast cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 27 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2003:238030 USPATFULL
TITLE: Isolated human drug-metabolizing proteins, nucleic acid molecules encoding human drug-metabolizing proteins, and uses thereof
INVENTOR(S): Guegler, Karl, Menlo Park, CA, UNITED STATES
Ketchum, Karen A., Germantown, MD, UNITED STATES
Di Francesco, Valentina, Rockville, MD, UNITED STATES
Beasley, Ellen M., Darnestown, MD, UNITED STATES
PATENT ASSIGNEE(S): PE CORPORATION (NY), Norwalk, CT (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003166187	A1	20030904
	US 6730505	B2	20040504
APPLICATION INFO.:	US 2002-162639	A1	20020606 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 2000-735935, filed on 14 Dec 2000, GRANTED, Pat. No. US 6420150

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-252895P	20001127 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CELERA GENOMICS CORP., ATTN: WAYNE MONTGOMERY, VICE PRES, INTEL PROPERTY, 45 WEST GUDE DRIVE, C2-4#20, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 2608
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides amino acid sequences of peptides that are

encoded by genes within the human genome, the drug-metabolizing enzyme peptides of the present invention. The present invention specifically provides isolated peptide and nucleic acid molecules, methods of identifying orthologs and paralogs of the drug-metabolizing enzyme peptides, and methods of identifying modulators of the drug-metabolizing enzyme peptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 28 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2003:180749 USPATFULL
TITLE: Methods of diagnosis of ovarian cancer, compositions and methods of screening for modulators of ovarian cancer
INVENTOR(S): Mack, David H., Menlo Park, CA, UNITED STATES
Gish, Kurt C., San Francisco, CA, UNITED STATES
PATENT ASSIGNEE(S): Eos Biotechnology, Inc., South San Francisco, CA (U.S. corporation)

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003124579	A1	20030703
APPLICATION INFO.:	US 2002-235399	A1	20020904 (10)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2002-372246P	20020412 (60)
	US 2001-350666P	20011113 (60)
	US 2001-317544P	20010905 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
NUMBER OF CLAIMS: 24
EXEMPLARY CLAIM: 1
LINE COUNT: 7005
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Described herein are genes whose expression are up-regulated or down-regulated in ovarian cancer. Related methods and compositions that can be used for diagnosis and treatment of ovarian cancer are disclosed. Also described herein are methods that can be used to identify modulators of ovarian cancer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 29 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2003:120026 USPATFULL
TITLE: Identification of modulatory molecules using inducible promoters
INVENTOR(S): Brown, Steven J., San Diego, CA, UNITED STATES
Dunnington, Damien J., San Diego, CA, UNITED STATES
Clark, Imran, San Diego, CA, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2003082511	A1	20030501
APPLICATION INFO.:	US 2001-965201	A1	20010925 (9)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: David B. Waller & Associates, 5677 Oberlin Drive, Suit 214, San Diego, CA, 92121
NUMBER OF CLAIMS: 52
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 8 Drawing Page(s)
LINE COUNT: 5526
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods for identifying an ion channel modulator, a target membrane receptor modulator molecule, and other modulatory molecules are disclosed, as well as cells and vectors for use in those methods. A polynucleotide encoding target is provided in a cell under control of an

inducible promoter, and candidate modulatory molecules are contacted with the cell after induction of the promoter to ascertain whether a change in a measurable physiological parameter occurs as a result of the candidate modulatory molecule.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 30 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2003:173825 CAPLUS
DOCUMENT NUMBER: 138:216449
TITLE: Method for evaluating neoplastic transformation degree of mammal-derived test sample
INVENTOR(S): Ushijima, Toshikazu; Miyamoto, Kazuaki
PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan; Japan as Represented by President of National Cancer Center
SOURCE: PCT Int. Appl., 59 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003018840	A1	20030306	WO 2002-JP8161	20020809
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2003144157	A2	20030520	JP 2002-231086	20020808
CA 2458182	AA	20030306	CA 2002-2458182	20020809
EP 1426449	A1	20040609	EP 2002-755897	20020809
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, SK				
US 2005064412	A1	20050324	US 2004-487219	20040220

PRIORITY APPLN. INFO.: JP 2001-252804 A 20010823
WO 2002-JP8161 W 20020809

AB A method is provided for evaluating the neoplastic transformation degree of a mammal-derived test sample (e.g., cell, tissue). The method is characterized in that it possesses a first step for measuring the methylation frequency of ***heparan*** sulfate D- ***glucosaminyl*** - ***3*** - ***O*** - ***sulfotransferase*** ***gene*** , or an index value in correlation to the methylation frequency, and a second step for evaluating the neoplastic transformation degree of the test sample based on the difference obtained by comparing the methylation frequency measured, or the index value in correlation to the methylation frequency with a ref. value.

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 31 OF 43 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2004:153815 BIOSIS
DOCUMENT NUMBER: PREV200400148261
TITLE: Coagulation in the placenta: The role of trophoblast cells.
AUTHOR(S): Sood, Rashmi [Reprint Author]; Kalloway, Shawn [Reprint Author]; Hartmut, Weiler [Reprint Author]
CORPORATE SOURCE: Blood Research Institute, Blood Center of Southeastern Wisconsin, Milwaukee, WI, USA
SOURCE: Blood, (November 16 2003) Vol. 102, No. 11, pp. 794a. print.
Meeting Info.: 45th Annual Meeting of the American Society of Hematology. San Diego, CA, USA. December 06-09, 2003. American Society of Hematology.

CODEN: BLOOAW. ISSN: 0006-4971.
DOCUMENT TYPE: Conference; (Meeting)
Conference; (Meeting Poster)
Conference; Abstract; (Meeting Abstract)
LANGUAGE: English
ENTRY DATE: Entered STN: 17 Mar 2004
Last Updated on STN: 17 Mar 2004
AB The hemostatic system plays a vital role in the physiological adaptation to pregnancy. While altered hemostasis in the mother jeopardizes fetal health, pregnancy itself is an "acquired" risk factor for the onset of thrombotic disorders in women predisposed to thrombophilia. In human and rodent placenta, trophoblast cells are exposed to maternal blood in a situation analogous to endothelial cells. Here we report experiments to address the role of placental trophoblasts in hemostasis at the feto-maternal interface. We have used gene chip technology to identify coagulation related gene expression in mouse trophoblast stem cells and their differentiated derivatives. Using RT-PCR analyses and in situ RNA hybridizations on mouse placenta, we have confirmed the expression and determined the localization of coagulation related genes in the developing mouse placenta. We show that trophoblasts express a repertoire of molecules required for activating the coagulation cascade, as well as curtailing clotting per se. Some of the coagulation regulators, including TM (thrombomodulin), EPCR (endothelial protein C receptor) and TFPI (tissue factor pathway inhibitor), are among the most highly expressed genes in these cells, ranking among the top 10%. Several coagulation regulators, including TM, EPCR, TFPI, CD39 (ectonucleoside triphosphate diphosphohydrolase 1), 3-OST-1 (heparan sulphate D-glucosaminyl 3-O-sulfotransferase 1), PAI-1 (plasminogen activator inhibitor-1) and tPA (tissue-Plasminogen activator) are coordinately up-regulated during trophoblast differentiation. In addition, trophoblasts express functional protease activated receptors (Par) 1,2 and 4. Activation of Par1 on cultured mouse trophoblasts induces a 10 to 15 fold increase in the expression of the immediate early genes, Egr1 and Fos, and a 5 fold increase in the expression of Cyr61, an angiogenic regulator essential for normal placental development. Our results bring forth novel signaling mediated roles of activated coagulation factors in the placenta and underscore the suspected role of placental trophoblasts in the maintenance of hemostasis at the fetomaternal interface. These data are also relevant for developing insights into the mechanism underlying adverse pregnancy outcome associated with thrombophilia.

L5 ANSWER 32 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
ACCESSION NUMBER: 2003:33516 CAPLUS
DOCUMENT NUMBER: 138:335272
TITLE: Methylation-associated silencing of heparan sulfate D-glucosaminyl 3-O-sulfotransferase-2 (3-OST-2) in human breast, colon, lung and pancreatic cancers
AUTHOR(S): Miyamoto, Kazuaki; Asada, Kiyoshi; Fukutomi, Takashi; Okochi, Eriko; Yagi, Yukiko; Hasegawa, Tadashi; Asahara, Toshimasa; Sugimura, Takashi; Ushijima, Toshikazu
CORPORATE SOURCE: Carcinogenesis Division, National Cancer Center Research Institute, 1-1 Tsukiji 5-chrome, Chuo-ku, Tokyo, 104-0045, Japan
SOURCE: Oncogene (2003), 22(2), 274-280
CODEN: ONCNES; ISSN: 0950-9232
PUBLISHER: Nature Publishing Group
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Aberrant CpG methylations play important roles in cancer development and progression. In this study, aberrant methylations in human breast cancer were searched for using methylation-sensitive representational difference anal. (MS-RDA). A CpG island (CGI) in the 5' region of the ***heparan*** sulfate D- ***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** -2 (3-OST-2) ***gene*** was found to be hypermethylated, while its exon 2 was hypomethylated. In seven breast cancer cell lines, hypermethylation of the 5' region and loss of 3-OST-2 expression were obsd. Treatment with a demethylating agent, 5-aza-2'-deoxycytidine, removed the methylation of the CGI in the 5' region and restored its expression, demonstrating silencing of the 3-OST-2

gene. Methylation-specific PCR (MSP) anal. in 85 primary breast cancers showed that the hypermethylation of the CGI in the 5' region was present in 75 (88%) of them. Quant. reverse transcriptase-PCR (RT-PCR) anal. in 37 primary breast cancers showed that the av. expression level was decreased in them. Further, MSP anal. in primary colon, lung and pancreatic cancers showed that hypermethylation of the CGI in the 5' region was present in the colon (8/10, 80%), lung (7/10, 70%) and pancreatic (10/10, 100%) cancers. These results showed that silencing of 3-OST-2 was present in a wide range of human cancers. The 3-OST-2 gene encodes an enzyme involved in the final modification step of heparan sulfate proteoglycans (HSPGs), and its silencing is expected to result in abnormal modification of HSPGs and abnormal signal transduction. From the high incidence, silencing of the 3-OST-2 gene is expected to have high diagnostic, and potentially therapeutic, values.
REFERENCE COUNT: 35 THERE ARE 35 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 33 OF 43 USPATFULL on STN
ACCESSION NUMBER: 2002:164763 USPATFULL
TITLE: ISOLATED HUMAN DRUG-METABOLIZING PROTEINS, NUCLEIC ACID MOLECULES ENCODING HUMAN DRUG-METABOLIZING PROTEINS, AND USES THEREOF
INVENTOR(S): Guegler, Karl, Menlo Park, CA, UNITED STATES
Ketchum, Karen A., Germantown, MD, UNITED STATES
Di Francesco, Valentina, Rockville, MD, UNITED STATES
Beasley, Ellen M., Darnestown, MD, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2002086381	A1	20020704
	US 6420150	B2	20020716
APPLICATION INFO.:	US 2000-735935	A1	20001214 (9)

	NUMBER	DATE
PRIORITY INFORMATION:	US 2000-252895P	20001127 (60)

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION
LEGAL REPRESENTATIVE: CELERA GENOMICS CORP., ATTN: WAYNE MONTGOMERY, VICE PRES, INTEL PROPERTY, 45 WEST GUDE DRIVE, C2-4#20, ROCKVILLE, MD, 20850
NUMBER OF CLAIMS: 23
EXEMPLARY CLAIM: 1
NUMBER OF DRAWINGS: 6 Drawing Page(s)
LINE COUNT: 2609
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides amino acid sequences of peptides that are encoded by genes within the human genome, the drug-metabolizing enzyme peptides of the present invention. The present invention specifically provides isolated peptide and nucleic acid molecules, methods of identifying orthologs and paralogs of the drug-metabolizing enzyme peptides, and methods of identifying modulators of the drug-metabolizing enzyme peptides.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L5 ANSWER 34 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:888960 CAPLUS
DOCUMENT NUMBER: 137:380005
TITLE: Polymorphism on ***heparan*** sulfate D-***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** -4 (3OST4) ***gene*** and uses for diagnosis and drug screening for treatment of inflammatory bowel disease (IBD)
INVENTOR(S): Schreiber, Stefan; Hampe, Jochen; Stoll, Monika
PATENT ASSIGNEE(S): Astrazeneca Ab, Swed.; Astrazeneca Uk Limited
SOURCE: PCT Int. Appl., 31 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002092849	A2	20021121	WO 2002-GB2129	20020508
WO 2002092849	A3	20030814		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

EP 1390534	A2	20040225	EP 2002-722502	20020508

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2004534530	T2	20041118	JP 2002-589715	20020508
US 2005277618	A1	20051215	US 2005-477507	20050509

PRIORITY APPLN. INFO.: GB 2001-11637 A 20010512
WO 2002-GB2129 W 20020508

AB The invention provides methods using single nucleotide polymorphisms on 3OST4 gene as genetic markers for diagnosis genetic susceptibility of IBD. The invention further provides a method of identifying a compd. useful for treatment of IBD which comprises assaying the compd. for its ability to modulate the activity or amt. of 3OST4. The assay is selected from measurement of 3OST4 activity using a cell line which expresses 3OST4 or using purified 3OST4 protein, and measurement of 3OST4 transcription or translation in a cell line expressing 3OST4. The invention also provides a method of prepg. a pharmaceutical compn., a diagnostic method for the detn. of susceptibility to IBD, a method for the diagnosis of IBD or a predisposition thereto and use of a compd. able to modulate the activity or amt. of 3OST4 in prepn. of a medicament for the treatment of IBD.

L5 ANSWER 35 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2002:777990 CAPLUS
DOCUMENT NUMBER: 137:306632
TITLE: Methods for activating heparan sulfate using glucosaminyl 3-O-sulfotransferase and glucosaminyl 6-O-sulfotransferase
INVENTOR(S): Rosenberg, Robert D.; Zhang, Lijuan; Beeler, David L.
PATENT ASSIGNEE(S): Massachusetts Institute of Technology, USA
SOURCE: PCT Int. Appl., 48 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002079258	A2	20021010	WO 2002-US10172	20020328
WO 2002079258	A3	20031106		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW

RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

CA 2441984	AA	20021010	CA 2002-2441984	20020328
EP 1402048	A2	20040331	EP 2002-739123	20020328

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR

JP 2005507640 T2 20050324 JP 2002-577881 20020328
US 2004191870 A1 20040930 US 2004-473180 20040325
PRIORITY APPLN. INFO.: US 2001-279523P P 20010328
US 2001-316289P P 20010830
WO 2002-US10172 W 20020328

AB Disclosed are methods of 6-O-sulfating glucosaminyl N-acetylglucosamine residues (GlcNAc) in a polysaccharide prepn. and methods of converting anticoagulant-inactive heparan sulfate to anticoagulant-active heparan sulfate and substantially pure polysaccharide prepns. may by such methods. Also disclosed is a mutant CHO cell which overexpresses anticoagulant-active heparan sulfate. Methods for elucidating the sequence of activity of enzymes in a biosynthetic pathway are provided.

L5 ANSWER 36 OF 43 Elsevier BIOBASE COPYRIGHT 2006 Elsevier Science B.V. on STN DUPLICATE
ACCESSION NUMBER: 2002205908 ESBIOBASE
TITLE: Characterization of a heparan sulfate octasaccharide that binds to herpes simplex virus type 1 glycoprotein D
AUTHOR: Liu J.; Shriver Z.; Marshall Pope R.; Thorp S.C.; Duncan M.B.; Copeland R.J.; Raska C.S.; Yoshida K.; Eisenberg R.J.; Cohen G.; Linhardt R.J.; Sasisekharan R.
CORPORATE SOURCE: J. Liu, Beard Hall, CB 7360, University of North Carolina, Chapel Hill, NC 27599, United States. E-mail: jian_liu@unc.edu
SOURCE: Journal of Biological Chemistry, (06 SEP 2002), 277/36 (33456-33467), 47 reference(s) CODEN: JBCHA3 ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English

AB Herpes simplex virus type 1 utilizes cell surface ***heparan*** sulfate as receptors to infect target cells. The unique ***heparan*** sulfate saccharide ***sequence*** offers the binding site for viral envelope proteins and plays critical roles in assisting viral infections. A specific 3-O-sulfated ***heparan*** sulfate is known to facilitate the entry of herpes simplex virus 1 into cells. The 3-O-sulfated ***heparan*** sulfate is generated by the ***heparan*** sulfate D-***glucosaminyl*** - ***3*** - ***O*** - ***sulfotransferase*** isoform 3 (3-OST-3), and it provides binding sites for viral glycoprotein D (gD). Here, we report the purification and structural characterization of an oligosaccharide that binds to gD. The isolated gD-binding site is an octasaccharide, and has a binding affinity to gD around 18 .mu.M, as determined by affinity coelectrophoresis. The octasaccharide was prepared and purified from a ***heparan*** sulfate oligosaccharide library that was modified by purified 3-OST-3 enzyme. The molecular mass of the isolated octasaccharide was determined using both nanoelectrospray ionization mass spectrometry and matrix-assisted laser desorption/ionization mass spectrometry. The results from the ***sequence*** analysis suggest that the structure of the octasaccharide is a heptasulfated octasaccharide. The proposed structure of the octasaccharide is .DELTA.UA-GlcNS-IdoUA2S-GlcNAc-UA2S-GlcNS-IdoUA2S-GlcNH.sub.23S6S. Given that the binding of 3-O-sulfated ***heparan*** sulfate to gD can mediate viral entry, our results provide structural information about ***heparan*** sulfate-assisted viral entry.

L5 ANSWER 37 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:775449 CAPLUS
DOCUMENT NUMBER: 136:33840
TITLE: Portable sulphotransferase domain determines sequence specificity of heparan sulphate 3-O-sulphotransferases
AUTHOR(S): Yabe, Tomio; Shukla, Deepak; Spear, Patricia G.; Rosenberg, Robert D.; Seeberger, Peter H.; Shworak, Nicholas W.
CORPORATE SOURCE: Angiogenesis Research Center, Department of Medicine, Harvard Medical School, Beth Israel Deaconess Medical Center, Boston, MA, 02215, USA

SOURCE: Biochemical Journal (2001), 359(1), 235-241
CODEN: BIJOAK; ISSN: 0264-6021
PUBLISHER: Portland Press Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB 3-O-Sulfates are the rarest substituent of heparan sulfate and are therefore ideally suited to the selective regulation of biol. activities. Individual isoforms of ***heparan*** sulfate D- ***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** (3-OST) exhibit ***sequence*** -specific action, which creates ***heparan*** sulfate structures with distinct biol. functions. For example, 3-OST-1 preferentially generates binding sites for anti-thrombin, whereas 3-OST-3 isoforms create binding sites for the gD envelope protein of herpes simplex virus 1 (HSV-1), which enables viral entry. 3-OST enzymes comprise a presumptive sulfotransferase domain and a divergent N-terminal region. To localize determinants of sequence specificity, we conducted domain swaps between cDNA species. The N-terminal region of 3-OST-1 was fused with the sulfotransferase domain of 3-OST-3A to generate N1-ST3A. Similarly, the N-terminal region of 3-OST-3A was fused to the sulfotransferase domain of 3-OST-1 to generate N3A-ST1. Wild-type and chimeric enzymes were transiently expressed in COS-7 cells and exts. were analyzed for selective generation of binding sites for anti-thrombin. 3-OST-1 was 270-fold more efficient at forming anti-thrombin-binding sites than 3-OST-3A, indicating its significantly greater selectivity for substrates that can be 3-O-sulfated to yield such sites. N3A-ST1 was as active as 3-OST-1, whereas the activity of N1-ST3A was as low as that of 3-OST-3A. Anal. of Chinese hamster ovary cell transfectants revealed that only 3-OST-3A and N1-ST3A generated gD-binding sites and conveyed susceptibility to infection by HSV-1. Thus sequence-specific properties of 3-OSTs are defined by a self-contained sulfotransferase domain and are not directly influenced by the divergent N-terminal region.
REFERENCE COUNT: 45 THERE ARE 45 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 38 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN
ACCESSION NUMBER: 2001:775265 CAPLUS
DOCUMENT NUMBER: 136:132090
TITLE: Investigation of differentially expressed genes during the development of mouse cerebellum
AUTHOR(S): Kagami, Yoshihiro; Furuichi, Teiichi
CORPORATE SOURCE: Laboratory for Molecular Neurogenesis, Brain Science Institute, RIKEN, Wako, 351-0198, Japan
SOURCE: Gene Expression Patterns (2001), 1(1), 39-59
CODEN: GEPEAD; ISSN: 1567-133X
PUBLISHER: Elsevier Science B.V.
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Before the discovery of DNA microarray and DNA chip technol., the expression of only a small no. of genes could be analyzed at a time. Currently, such technol. allows us the simultaneous anal. of a large no. of genes to systematically monitor their expression patterns that may be assocd. with various biol. phenomena. We utilized the Affymetrix GeneChip Mu11K to analyze the gene expression profile in developing mouse cerebellum to assist in the understanding of the genetic basis of cerebellar development in mice. Our anal. showed 81.6% (10.321/12.654) of the genes represented on the GeneChip were expressed in the postnatal cerebellum, and among those, 8.7% (897/10.321) were differentially expressed with more than a two-fold change in their max. and min. expression levels during the developmental time course. Further anal. of the differentially expressed genes that were clustered in terms of their expression patterns and the function of their encoded products revealed an aspect of the genetic foundation that lies beneath the cellular events and neural network formation that takes place during the development of the mouse cerebellum.
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 39 OF 43 Elsevier BIOBASE COPYRIGHT 2006 Elsevier Science B.V. on STN DUPLICATE
ACCESSION NUMBER: 1999058496 ESBIOBASE

TITLE: Expression of heparan sulfate D-glucosaminyl 3-O-sulfotransferase isoforms reveals novel substrate specificities

AUTHOR: Liu J.; Shworak N.W.; Sinay P.; Schwartz J.J.; Zhang L.; Fritze L.M.S.; Rosenberg R.D.

CORPORATE SOURCE: R.D. Rosenberg, Massachusetts Inst. of Technology, 77 Massachusetts Ave., Cambridge, MA 02139, United States.

SOURCE: Journal of Biological Chemistry, (19 FEB 1999), 274/8 (5185-5192), 40 reference(s)
CODEN: JBCHA3 ISSN: 0021-9258

DOCUMENT TYPE: Journal; Article

COUNTRY: United States

LANGUAGE: English

SUMMARY LANGUAGE: English

AB The 3-O-sulfation of ***glucosamine*** residues is an important modification during the biosynthesis of ***heparan*** sulfate (HS). Our previous studies have led us to purify and molecularly clone the ***heparan*** sulfate n- ***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** (3-OST-1), which is the key enzyme converting nonanticoagulant ***heparan*** sulfate (HS(inact)) to anticoagulant ***heparan*** sulfate (HS(act)). In this study, we expressed and characterized the full-length cDNAs of 3-OST-1 homologous genes, designated as 3-OST-2, 3-OST-3(A), and 3- OST-3(B) as described in the accompanying paper (Shworak, N. W., Liu, J., Petros, L. M., Zhang, L., Kobayashi, M., Copeland, N. G., Jenkins, N. A., and Rosenberg, R. D. (1999) J. Biol. Chem. 274, 5170-5184). AH these cDNAs were successfully expressed in COS-7 cells, and ***heparan*** sulfate sulfotransferase activities were found in the cell extracts. We demonstrated that 3-OST-2, 3- OST-3(A), and 3-OST-3(B) are ***heparan*** sulfate n- ***glucosaminyl*** 3-O- sulfotransferases because the enzymes transfer sulfate from adenosine 3'- phosphophate 5'-phospho- .sup.3.sup.5S sulfate (.sup.3.sup.5S PAPS) to the 3-OH position of ***glucosamine*** . 3-OST-3(A) and 3-0ST-3(B) sulfate an identical disaccharide. HS(act) conversion activity in the cell extract transfected by 3-OST-1 was shown to be 300-fold greater than that in the cell extracts transfected by 3-OST-2 and 3-OST-3(A), suggesting that 3-OST-2 and 3-OST-3(A) do not make HS(act). The results of the disaccharide analysis of the nitrous acid-degraded .sup.3.sup.5S HS suggested that 3-OST-2 transfers sulfate to GlcA2S-GlcNS and IdoA2S-GIcNS; 3-OST-3(A) transfers sulfate to IdoA2S-GlcNS. Our results demonstrate that the 3-O-sulfation of ***glucosamine*** is generated by different isoforms depending on the saccharide structures around the modified ***glucosamine*** residue. This discovery has provided evidence for a new cellular mechanism for generating a defined saccharide ***sequence*** in structurally complex HS polysaccharide.

L5 ANSWER 40 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 4

ACCESSION NUMBER: 1999:150649 CAPLUS

DOCUMENT NUMBER: 130:333522

TITLE: Multiple isoforms of heparan sulfate D-glucosaminyl 3-O-sulfotransferase. isolation, characterization, and expression of human cDNAs and identification of distinct genomic loci

AUTHOR(S): Shworak, Nicholas W.; Liu, Jian; Petros, Lorin M.; Zhang, Lijuan; Kobayashi, Masahi; Copeland, Neal G.; Jenkins, Nancy A.; Rosenberg, Robert D.

CORPORATE SOURCE: Department of Biology, Massachusetts Institute of Technology, Cambridge, MA, 02139, USA

SOURCE: Journal of Biological Chemistry (1999), 274(8), 5170-5184
CODEN: JBCHA3; ISSN: 0021-9258

PUBLISHER: American Society for Biochemistry and Molecular Biology

DOCUMENT TYPE: Journal

LANGUAGE: English

AB 3-O-Sulfated glucosaminyl residues are rare constituents of heparan sulfate and are essential for the activity of anticoagulant heparan sulfate. Cellular prodn. of the crit. active structure is controlled by the rate-limiting enzyme, heparan sulfate D-glucosaminyl

3-O-sulfotransferase-1 (3-OST-1) (EC 2.8.2.23). We have probed the expressed sequence tag data base with the carboxyl-terminal sulfotransferase domain of 3-OST-1 to reveal three novel, incomplete human cDNAs. These were utilized in library screens to isolate full-length cDNAs. Clones corresponding to predominant transcripts were obtained for the 367-, 406-, and 390-amino acid enzymes 3-OST-2, 3-OST-3A, and 3-OST-3B, resp. These type II integral membrane proteins are comprised of a divergent amino-terminal region and a very homologous carboxyl-terminal sulfotransferase domain of .apprx.260 residues. Also recovered were partial length clones for 3-OST-4. Expression of the full-length enzymes confirms the 3-O-sulfation of specific glucosaminyl residues within heparan sulfate (Liu, J., Shworak, N. W., Sinay, P., Schwartz, J. J. Zhang, L., Fritze, L. M. S., and Rosenberg, R. D. (1999) J. Biol. Chem. 274, 5185-5192). Southern analyses suggest the human 3OST1, 3OST2, and 3OST4 genes, and the corresponding mouse isologs, are single copy. However, 3OST3A and 3OST3B genes are each duplicated in humans and show at least one copy each in mice. Intriguingly, the entire sulfotransferase domain sequence of the 3-OST-3B cDNA (774 base pairs) was 99.2% identical to the same region of 3-OST-3A. Together, these data argue that the structure of this functionally important region is actively maintained by gene conversion between 3OST3A and 3OST3B loci. Interspecific mouse back-cross anal. identified the loci for mouse 3Ost genes and syntenic assignments of corresponding human isologs were confirmed by the identification of mapped sequence-tagged site markers. Northern blot analyses indicate brain exclusive and brain predominant expression of 3-OST-4 and 3-OST-2 transcripts, resp.; whereas, 3-OST-3A and 3-OST-3B isoforms show widespread expression of multiple transcripts. The reiteration and conservation of the 3-OST sulfotransferase domain suggest that this structure is a self-contained functional unit. Moreover, the extensive no. of 3OST genes with diverse expression patterns of multiple transcripts suggests that the novel 3-OST enzymes, like 3-OST-1, regulate important biol. properties of heparan sulfate proteoglycans.
REFERENCE COUNT: 64 THERE ARE 64 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 41 OF 43 SCISEARCH COPYRIGHT (c) 2006 The Thomson Corporation on STN
ACCESSION NUMBER: 2000:268112 SCISEARCH
THE GENUINE ARTICLE: 290FP
TITLE: Tissue factor-factor VIIA pathway regulates ***gene*** expression of ***heparan*** sulfate D-***glucosaminyl*** ***3*** - ***O*** - ***sulfotransferase*** in human cancer cells
AUTHOR: Taniguchi T (Reprint); Kakkar A K; Ruf W; Lemoine N R
CORPORATE SOURCE: Imperial Canc Res Fund, Mol Oncol Unit, London WC2A 3PX, England; Univ London Imperial Coll Sci Technol & Med, Sch Med, Dept Surg, London W12 0NN, England; Scripps Res Inst, Dept Immunol & Vasc Biol, La Jolla, CA 92037 USA
COUNTRY OF AUTHOR: England; USA
SOURCE: THROMBOSIS AND HAEMOSTASIS, (AUG 1999) Supp. [S], pp. 15-15. MA 42.
ISSN: 0340-6245.
PUBLISHER: F K SCHATTAUER VERLAG GMBH, P O BOX 10 45 43, LENZHALDE 3, D-70040 STUTTGART, GERMANY.
DOCUMENT TYPE: Conference; Journal
LANGUAGE: English
REFERENCE COUNT: 0
ENTRY DATE: Entered STN: 2000
Last Updated on STN: 2000

L5 ANSWER 42 OF 43 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 5
ACCESSION NUMBER: 1997:729656 CAPLUS
DOCUMENT NUMBER: 128:58940
TITLE: Molecular cloning and expression of mouse and human cDNAs encoding heparan sulfate D-glucosaminyl 3-O-sulfotransferase
AUTHOR(S): Shworak, Nicholas W.; Liu, Jian; Fritze, Linda M. S.; Schwartz, John J.; Zhang, Lijuan; Logeart, Delphine; Rosenberg, Robert D.
CORPORATE SOURCE: Department of Biology, Massachusetts Institute of

Technology, Cambridge, MA, 02139, USA
SOURCE: Journal of Biological Chemistry (1997), 272(44), 28008-28019
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB The cellular rate of anticoagulant heparan sulfate proteoglycan (HSPGact) generation is detd. by the level of a kinetically limiting microsomal activity, HSact conversion activity, which is predominantly composed of the long sought heparan sulfate D-glucosaminyl 3-O-sulfotransferase (3-OST) (Shworak, N. W., Fritze, L. M. S., Liu, J., Butler, L. D., and Rosenberg, R. D. (1996) J. Biol. Chem. 271, 27063-27071; Liu, J., Shworak, N. W., Fritze, L. M. S., Edelberg, J. M., and Rosenberg, R. D. (1996) J. Biol. Chem. 271, 27072-27082). Mouse 3-OST cDNAs were isolated by proteolyzing the purified enzyme with Lys-C, sequencing the resultant peptides as well as the existing amino terminus, employing degenerate polymerase chain reaction primers corresponding to the sequences of the peptides as well as the amino terminus to amplify a fragment from LTA cDNA, and utilizing the resultant probe to obtain full-length enzyme cDNAs from a .lambda. Zap Express LTA cDNA library. Human 3-OST cDNAs were isolated by searching the expressed sequence tag data bank with the mouse sequence, identifying a partial-length human cDNA and utilizing the clone as a probe to isolate a full-length enzyme cDNA from a .lambda. TriplEx human brain cDNA library. The expression of wild-type mouse 3-OST as well as protein A-tagged mouse enzyme by transient transfection of COS-7 cells and the expression of both wild-type mouse and human 3-OST by in vitro transcription/translation demonstrate that the two cDNAs directly encode both HSact conversion and 3-OST activities. The mouse 3-OST cDNAs exhibit three different size classes because of a 5'-untranslated region of variable length, which results from the insertion of 0-1629 base pairs (bp) between residues 216 and 217; however, all cDNAs contain the same open reading frame of 933 bp. The length of the 3'-untranslated region ranges from 301 to 430 bp. The nucleic acid sequence of mouse and human 3-OST cDNAs are .apprx.85% similar, encoding novel 311- and 307-amino acid proteins of 35,876 and 35,750 Da, resp., that are 93% similar. The encoded enzymes are predicted to be intraluminal Golgi residents, presumably interacting via their C-terminal regions with an integral membrane protein. Both 3-OST species exhibit five potential N-glycosylation sites, which account for the apparent discrepancy between the mol. masses of the encoded enzyme (.apprx.34 kDa) and the previously purified enzyme (.apprx.46 kDa). The two 3-OST species also exhibit .apprx.50% similarity with all previously identified forms of the heparan biosynthetic enzyme N-deacetylase/N-sulfotransferase, which suggests that heparan biosynthetic enzymes share a common sulfotransferase domain.
REFERENCE COUNT: 68 THERE ARE 68 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 43 OF 43 BIOTECHNO COPYRIGHT 2006 Elsevier Science B.V. on STN
ACCESSION NUMBER: 1988:18255558 BIOTECHNO
TITLE: Biosynthesis of heparin. O-sulfation of the antithrombin-binding region
AUTHOR: Kusche M.; Backstrom G.; Riesenfeld J.; Petitou M.; Choay J.; Lindahl U.
CORPORATE SOURCE: Department of Veterinary Medical Chemistry, Swedish University of Agricultural Sciences, Biomedical Center, S-751 23 Uppsala, Sweden.
SOURCE: Journal of Biological Chemistry, (1988), 263/30 (15474-15484)
CODEN: JBCHA3 ISSN: 0021-9258
DOCUMENT TYPE: Journal; Article
COUNTRY: United States
LANGUAGE: English
SUMMARY LANGUAGE: English
AN 1988:18255558 BIOTECHNO
AB The antithrombin-binding region in ***heparin*** is a pentasaccharide ***sequence*** with the predominant structure GlcNAc(6-OSO.sub.3)-GlcA-GlcNSO.sub.3(3,6-di-OSO.sub.3)-IdoA-(2-OSO.sub.3)-GlcNSO.sub.3(6 OSO.sub.3) (where GlcA and IdoA represent D-glucuronic and L-iduronic

acid, respectively), in which the 3-O-sulfate residue on the internal ***glucosaminyl*** unit is a marker group for this particular region of the polysaccharide molecule. A ***heparin*** octasaccharide which contained the above pentasaccharide ***sequence*** was N/O-desulfated and re-N-sulfated and was then incubated with adenosine 3'-phosphate 5'-phospho.cents..sup.3.sup.5S!sulfate in the presence of a microsomal fraction from mouse mastocytoma tissue. Fractionation of the resulting .sup.3.sup.5S-labeled octasaccharide on anti-thrombin-Sepharose yielded a high affinity fraction that accounted for .sim.2% of the total incorporated label. Structural analysis of this fraction indicated that the internal ***glucosamine*** unit of the pentasaccharide ***sequence*** was 3-O-.sup.3.sup.5S-sulfated, whereas both adjacent ***glucosamine*** units carried 6-O-.cents..sup.3.sup.5S!sulfate groups. In contrast, the fractions with low affinity for antithrombin (.sim.98% of incorporated .sup.3.sup.5S) showed no consistent O-.sup.3.sup.5S sulfation pattern and essential lacked ***glucosaminyl*** 3-O-.cents..sup.3.sup.5S!sulfate groups. It is suggested that the 3-O-sulfation reaction concludes the formation of the antithrombin-binding region. This proposal was corroborated in a similar experiment using a synthetic pentasaccharide with the structure GlcNSO.sub.3(6-OSO.sub.3)-GlcA-GlcNSO.sub.3(6-OSO.sub.3)-IdoA (2-OSO.sub.3)-GlcNSO.sub.3(6-OSO.sub.3) as sulfate acceptor. This molecule corresponds to a functional antithrombin-binding region but for the lack of a 3-O-sulfate group at the internal ***glucosamine*** unit. The .sup.3.sup.5S-labeled pentasaccharide recovered after incubation bound with high affinity to antithrombin-Sepharose and contained a 3-O-.cents..sup.3.sup.5S!sulfate group at the internal ***glucosamine*** residue as the only detectable labeled component. The use of this pentasaccharide substrate along with the affinity matrix provides a highly specific assay for the ***3*** - ***O*** - ***sulfotransferase*** .

=> D HIS

L1 QUE ((GLUCOSAMINYL (S) 3-O-SULFOTRANSFERASE) OR (GLUCOSAMINE (S

L2 274 S L1
L3 59 S (GENE OR SEQUENCE OR POLYNUCLEOTIDE) (S)L2
L4 58 S (HEPARIN OR HEPARAN)(S)L3
L5 43 DUP REM L4 (15 DUPLICATES REMOVED)

=> log y